

## REMARKS

Claims 1-37 are currently pending. Independent claims 1, 11, 21, 30 and 34 are amended by the above. Support for these changes can be found, *e.g.*, in paragraphs [0034] and [0035] of the published version of the present application (Pub. No. U.S. 2004/0174911). Dependent claim 37 is amended to correct a typographical error.

Applicants note with appreciation the indication that the restriction requirement has been withdrawn.

The Office Action includes a rejection of claims 1, 4-6, 9, 10, 21, 24-26 and 29 under 35 U.S.C. § 103 as allegedly being unpatentable over *Sinha et al.* (U.S. Patent No. 7,191,136) in view of *Rose et al.* (U.S. Patent No. 6,947,886); and a rejection of claims 2, 3, 7, 8, 11-20, 22, 23, 27, 28 and 30-37 under 35 U.S.C. § 103 as allegedly being unpatentable over *Sinha et al.* in view of *Rose et al.*, and in further view of *Geiger et al.* (U.S. Patent No. 7,343,287). These rejections are respectfully traversed.

In applying the prior art, the Office Action suggests that *Sinha et al.* discloses a method that includes bandwidth-extension-encoding of digital data by use of the low pass filter 402. Applicants respectfully disagree. *Sinha et al.* discloses a digital signal processor that is alleged to have efficient coding of high frequency signal information through the use, in part, of a low pass filter 402 with a cut-off frequency of  $f_l$  in which the low frequency components are coded, as well as a parametric representation for high frequency components from the high pass filter 404 with a cut-off frequency of  $f_h$  based on a non-linear model. However, Applicants respectfully submit that this does not meet the recitations of a bandwidth-extension-

encoding of digital data that outputs bandwidth-limited data and generates bandwidth extension information. The definitions of these terms as found in the specification paragraphs [0034] and [0035] have been added to the claims to emphasize that the bandwidth-extension-encoding includes receiving digital data, slicing off a portion of the digital data in a high frequency band, *the remaining portion of the digital data being bandwidth-limited data, and wherein the bandwidth extension information is information necessary for restoring the sliced portion of the digital data.* The parametric representation is said to require significantly fewer bits than conventional coding on higher components in *Sinha et al.*

Further, the non-linear model parameters in *Sinha et al.* are obtained by modeling the high frequency components as a function of low frequency components shown in equations 1 and 3 (see col. 8 lines 10-35), and thus are clearly distinguishable from the bandwidth extension information of the claimed invention.

With respect to *Rose et al.*, the undersigned has reviewed column 5, line 60 - column 6, line 48 and Figures 3 and 4 which merely show a base layer and an enhancement layer. What it does not disclose is encoding bandwidth-limited data into a hierarchical structure having a base layer and at least one enhancement layer.

Perhaps more importantly, the undersigned can find no reason that one would want to combine *Sinha et al.* and *Rose et al.* The Office Action suggests that one would be motivated to modify *Sinha et al.* by replacing the standard PAC coding (410 in Figure 4) with the coding in Figure 4 of *Rose et al.* "in order to improve bit rates while preserving signal quality." Absent the teachings of the present Applicants, there is no reason to believe that combining these two systems would lead to

improved bit rates while preserving signal quality any more than taking them individually.

It should be noted the Office Action has the initial burden of establishing a factual basis to support the legal conclusions of obviousness, *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ.2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103 based upon a combination of prior art elements, in *KSR Int'l v. Teleflex, Inc.*, 127 S.Ct. 1724, 1721, 82 USPQ.2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by merely conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ.2d 1329, 1336 (Fed. Cir. 2006).

It is noted that dependent claims add distinctions that further remove the present invention from applied art. For instance, claims 2 and 3 disclose encoding mechanisms. While bit slice encoding may be known from *Geiger et al.*, it is not clear why one skilled in the art would modify either *Sinha et al.* or *Rose et al.*, let along the hypothetical combination, to include such an encoding technique. Other distinctions exist in the dependent which will not be belabored for sake of brevity.

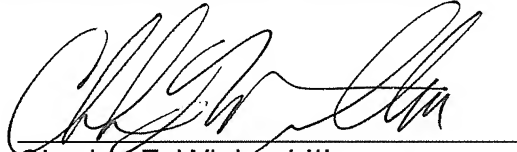
In light of the foregoing, Applicants respectfully request reconsideration and allowance of the above-captioned application. Should any residual issues exist or arise, the Examiner is invited to contact the undersigned at the number listed below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: February 17, 2009

By:

A handwritten signature in black ink, appearing to read 'Charles F. Wieland III', is written over a horizontal line.

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